

WHAT IS CLAIMED IS:

1. A stent, comprising:

a) an expandable tubular body having a first end, a second end, a plurality of cylindrical wall sections defining an open-walled structure, and at least one eyelet member having an opening configured to receive a securing member therein to secure a cover to the tubular body; and

b) a plurality of bar members connected to the tubular body, so that at least one bar member is connected to and extends between longitudinally adjacent wall sections.

2. The stent of claim 1 wherein each wall section comprises a curvilinear member which extends around a circumference of the tubular body and which has a plurality of turns, each turn having a concave surface facing in a direction opposite to the concave surface of a radially adjacent turn, and a convex surface facing in a direction opposite to the convex surface of a radially adjacent turn, and wherein each bar member is connected to and extends between the concave surface of a turn and the convex surface of a turn on a longitudinally adjacent wall section.

3. The stent of claim 2 wherein the turns of a wall section are in phase with the turns of a longitudinally adjacent wall section.

4. The stent of claim 1 wherein the at least one eyelet member is an open loop defined at least in part by the concave surface of the turn of the tubular body wall section.

5 5. The stent of claim 1 wherein the at least one eyelet member is a closed loop directly attached to the turn of the tubular body wall section.

6. The stent of claim 1 wherein the at least one eyelet member is attached to the bar member.

10

7. A stent assembly, comprising:

a) a stent comprising

i) an expandable tubular body having a first end, a second end, a first wall section at the first end of the tubular body, a second wall section at the second end of tubular body, and at least one intermediate wall section between the first and second wall sections; and

15

ii) one or more bar members connected to the tubular body, so that at least one bar member is connected to and extends between two longitudinally adjacent wall sections; and

20

b) a cover having a first end, a second end, and an intermediate section between the first and second ends, wherein the first end of the cover is disposed between one of the longitudinally adjacent wall sections and the bar member connected thereto.

8. The stent assembly of claim 7 wherein the stent comprises a partially covered stent, and the two longitudinally adjacent wall sections are intermediate wall sections of the tubular body, and one or both ends of the stent are uncovered.

5

9. The stent assembly of claim 7 wherein the stent comprises a partially covered stent, and the two longitudinally adjacent wall sections are an intermediate wall section and the first wall section of the tubular body, and an intermediate portion of the stent is uncovered.

10

10. The stent assembly of claim 7 wherein the at least one bar member is connected to and extends between the first wall section and an intermediate wall section longitudinally adjacent to the first wall section, and at least one bar member is connected to and extends between the second wall section and an intermediate wall section longitudinally adjacent to the second wall section.

15

11. The stent assembly of claim 10 wherein the cover first end is disposed between the first wall section and the at least one bar member connected thereto.

20

12. The stent assembly of claim 10 wherein the first end of the cover is adjacent to one of an inner surface or an outer surface of the first wall section of the tubular body, and the intermediate section of the cover is adjacent an outer surface of the at least one intermediate wall section when the first end of the

cover is adjacent to the inner surface of the first wall section and to an inner surface of the at least one intermediate wall section when the first end of the cover is adjacent to the outer surface of the first wall section.

5 13. A stent assembly, comprising:

 a) a stent comprising

 i) an expandable tubular body having a first end, a
second end, a first wall section at the first end of the tubular body, a
second wall section at the second end of tubular body, and at least one
10 intermediate wall section between the first and second wall sections; and

 ii) a plurality of bar members connected to the tubular
body, so that at least one bar member is connected to and extends
between longitudinally adjacent wall sections; and

 b) a cover having a first end, a second end, and an
15 intermediate section between the first and second ends, wherein the first
end of the cover is adjacent to an inner surface of the first wall section of
the tubular body, the second end of the cover adjacent to an inner surface
of the second wall section of the tubular body, and the intermediate
section of the cover is adjacent an outer surface of the at least one
20 intermediate wall section.

14. The stent assembly of claim 13 having a first bar member
extending between the first wall section and a longitudinally adjacent wall section
and a second bar member extending between the second wall section and a

longitudinally adjacent wall section, and wherein the inner surface of the first end of the cover is adjacent an outer surface of the first bar member, and the inner surface of the second end of the cover is adjacent an outer surface of the second bar member.

5

15. The stent assembly of claim 14 having a third bar member extending between the first wall section and a longitudinally adjacent wall section and a fourth bar member extending between the second wall section and a longitudinally adjacent wall section.

10

16. The stent assembly of claim 13 wherein the cover has a length substantially equal to a length of the stent.

15

17. The stent assembly of claim 13 wherein the cover first end is in contact with turns of the first wall section which have concave surfaces facing the intermediate wall section.

20

18. The stent assembly of claim 13 wherein the cover is formed of bio-compatible material selected from the group consisting of tissue, polytetrafluoroethylenes, and polyesters.

19. The stent assembly of claim 13 wherein the tubular body has at least one eyelet member having an opening configured to receive a securing member therein to secure a cover to the tubular body.

20. A stent, comprising:

a) an expandable tubular body having a first end, a second end, and a plurality of wall sections defining an open-walled structure, wherein each wall section comprises a curvilinear member which extends around a circumference of the tubular body and which has a plurality of turns, each turn having

i) a concave surface facing in a direction opposite to the concave surface of a radially adjacent turn; and

ii) a convex surface facing in a direction opposite to the convex surface of a radially adjacent turn; and

b) a plurality of bar members connected to the tubular body, so that at least one bar member is connected to and extends between longitudinally adjacent wall sections, each bar member having a first end connected to the concave surface of a first turn and a second end connected to the convex surface of a second turn on a longitudinally adjacent wall section.

21. The stent of claim 20 wherein the tubular body has a first wall section at the first end of the tubular body and a second wall section at the second end of the tubular body, and at least one intermediate wall section therebetween, and wherein the first and second wall sections have turns with convex surfaces which face toward the at least one intermediate wall section which are not connected to a bar member.

22. The stent of claim 21 including a cover on the stent having a first end, a second end, and an intermediate section between the first and second ends, wherein the first end of the cover is adjacent to an inner surface of the first wall section of the tubular body, the second end of the cover adjacent to an inner surface of the second wall section of the tubular body, and the intermediate section of the cover is adjacent an outer surface of the at least one intermediate wall section.

23. The stent of claim 22 wherein the concave surface of the turns define at least in part an eyelet member having parallel sides and a smaller inner diameter than sections of the turn adjacent thereto, the eyelet member being configured to receive a securing member therein to secure a cover to the tubular body.